Chapter 18
Writing the Research Report

(Reminder: Don't forget to utilize the concept maps and study questions as you study this and the other chapters.)

The purpose of this final chapter is to provide useful advice on how to organize and write a research paper that has the potential for publication.

There are four main sections in this chapter:
1. General Principles Related to Writing the Research Report.
2. Writing Quantitative Research Reports Using the APA Style.
3. Writing Qualitative Research Reports.
4. Writing Mixed Research Reports.

General Principles Related to Writing the Research Report

We begin this section with some general writing tips and by listing some sources on writing.

- Simple, clear, and direct communication should be your most important goal when you write a research report.

Language

The following three guidelines will help you select appropriate language in your report:

1. Choose accurate and clear words that are free from bias. One way to do this is to be very specific rather than less specific.

2. Avoid labeling people whenever possible.

3. Write about your research participants in a way that acknowledges their participation.
   - For example, avoid the impersonal term "subject" or subjects; words such as "research participants" or children or adults are preferable.

Keeping in mind the above guidelines, you should give special attention to the following issues which are explained more fully in our chapter and, especially, in the *APA Publication Manual*:

- Gender. The bottom line is to avoid sexist language.
- Sexual Orientation. Terms such as *homosexual* should be replaced with terms such as *lesbians*, *gay men*, and *bisexual women or men*. Specific instances of sexual behavior should be referred to with terms such as *same gender*, *male-male*, *female-female*, and *male-female*.
- Racial and Ethnic Identity. Ask participants about their preferred designations and use them. When writing this term, capitalize it (e.g., African American).

- Disabilities. Do not to equate people with their disability. For example, refer to a participant as a *person who has cancer* rather than as a cancer victim.
- Age. Acceptable terms are *boy* and *girl*, *young man* and *young woman*, *male adolescent* and *female adolescent*. *Older person* is preferred to *elderly*. Call people eighteen and *older men and women*.

Editorial Style

Italics.

- As a general rule, use italics infrequently. If you are submitting a paper for publication, you can now use italics directly rather than using underlines to signal what is to be italicized.

Abbreviations

- Use abbreviations sparingly, and try to use conventional abbreviations (such as IQ, e.g., c.f., i.e., etc.).

Headings

- The APA Manual and our chapter specifies five different levels of headings and the combinations in which they are to be used in your report.

- If you are using two levels of headings, center the first level and use upper- and lowercase letters (i.e., do not use all caps), and place the second heading on the left side in upper- and lowercase letters and in italics. Here is an example:

Method

Procedure

- If you are using three levels of headings, do the first two levels as just shown for two levels. The third level should be in upper- and lowercase letters, italicized, indented, and ending with a period.
- Here is an example of how to use three levels of headings:

Method

Procedure

Instruments. (Start the text on this same line)

Quotations

- Quotations of fewer than 40 words should be inserted into the text and enclosed in double quotation marks. Quotations of 40 or more words should be displayed in a free standing block of lines without quotation marks. The author, year, and specific page from which the quote is taken should always be included.

Numbers

- Use words for numbers that begin a sentence and for numbers that are below ten.
- See the APA Publication Manual for exceptions to this rule.

Physical Measurements

- APA recommends using metric units for all physical measurements. You can also use other units, as long as you include the metric equivalent in parentheses.

Presentation of Statistical Results

- Provide enough information to allow the reader to corroborate the results. See your book and the APA manual for specifics (e.g., an analysis of variance significance test of four group means would be presented like this: $F(3, 32) = 8.79$, $p = .03$).
- Note that the use of an equal sign is preferred when reporting probability values.
- If a probability value is less than .001, then use $p < .001$ rather than $p = .000$

Reference Citations in the Text

- APA format is an author-date citation method. The text shows the specifics.
- Here is one example: "Smith (1999) found that . . ."
- Frequently you will put references at the end of sentences. Here is an example, "Mastery motivation has been found to affect achievement with very young children (Turner & Johnson, 2003)."

Reference List

- All citations in the text must appear in the reference list. See page 456 of the text or the APA Manual for the specific format to follow.
- Here are two examples:

American Psychological Association. (1994). Publication manual of the American Psychological Association (4th ed.). Washington, DC: Author.

Turner, L.A., & Johnson, R.B. (2003). A model of mastery motivation for at-risk preschoolers. Journal of Educational Psychology, 95(3), 495-505.

Typing

- Double space all material.
- Use 1-inch margins.
- Use only one space between the end of a sentence and the beginning of the next sentence.

Writing Quantitative Research Reports Using the APA Style

There are seven major parts to the research report:

1. Title page
2. Abstract
3. Introduction
4. Method
5. Results
6. Discussion
7. References

I will make a few brief comments on each of these below.

- Discussion of author notes, footnotes, tables, figure captions, and figures is only in the textbook (and, of course, in the *APA Publication Manual*).

1. Title Page
   - Your paper title should summarize the main topic of the paper in about 10 to 12 words.

2. Abstract
   - This should be a comprehensive summary which is about 120 words. For a manuscript submitted for review, it is typed on a separate page.

3. Introduction
   - This section is not labeled. It should present the research problem and place it in the context of other research literature in the area.

4. Method
   - This section does not start on a separate page in a manuscript being submitted for review.
   - The most common subsections are *Participants* (e.g., list the number of participants, their characteristics, and how they were selected), *Apparatus or Materials* or *Instruments* (e.g., list materials used and how they can be obtained), and *Procedure* (e.g., provide a step-by-step account of what the researcher and participants did during the study so that someone could replicate it).

5. Results
   - This does not start on a separate page in your manuscript.
   - It is where you report on the results of your data analysis and statistical significance testing.
   - Be sure to report the significance level that you are using (e.g., "An alpha level of .05 was used in this study") and report your observed effect sizes along with the tests of statistical significance.
   - Tables and figures are expensive but can be used when they effectively illustrate your ideas.

6. Discussion
   - This is where you interpret and evaluate your results presented in the previous section.
   - Be sure to state whether your hypotheses were supported.
   - Also, answer the following questions:
     1. What does the study contribute?
     2. How has it helped solve the study problem?
     3. What conclusion and theoretical implications can be drawn from the study?
     4. What are the limitations of the study?
     5. What are some suggestions for future research in this area?

7. References

- Center the word References at the top of the page and double-space all entries.

Writing Qualitative Research Reports

We recommend that qualitative researchers also follow the guidelines given above when writing manuscripts for publication.

We recommend that qualitative researchers use the same seven major parts that were discussed for the quantitative research report.

- Title Page and Abstract. The goals are exactly the same as before. You should provide a clear and descriptive title. The abstract should describe the key focus of the study, its key methodological features, and the most important findings.
- Introduction. Clearly explain the purpose of your study and situate it in any research literature that is relevant to your study. In qualitative research, research questions will typically be stated in more open-ended and general forms such as the researcher hopes to "discover," "explore a process," "explain or understand," or "describe the experiences."
- Method. It is important that qualitative researchers always include this section in their reports. This section includes information telling how the study was done, where it was done, with whom it was done, why the study was designed as it was, how the data were collected and analyzed, and what procedures were carried out to ensure the validity of the arguments and conclusions made in the report.
- Results. The overriding concern when writing the results section is to provide sufficient and convincing evidence. Remember that assertions must be backed up with empirical data. The bottom line is this: It's about evidence.
  - -- You will need to find an appropriate balance between description and interpretation in order to write a useful and convincing results section.
  - -- Several specific strategies are discussed in the chapter (e.g., providing quotes, following interpretative statements with examples, etc.).
  - -- We state that regardless of the specific format of your results section, you must always provide data (i.e., descriptions, quotes, data from multiple sources, and so forth) that back up your assertions.
  - -- Effective ways to organize the results section are organizing the content around the research questions, a typology created in the study, the key themes, or around a conceptual scheme used in the study.
  - -- It can also be very helpful to use diagrams, matrices, tables, figures, etc. to help communicate your ideas in a qualitative research report.
- Discussion. You should state your overall conclusions and offer additional interpretations in this section of the report. Even if your research is exploratory, it is important to fit your findings back into the relevant research literature. You may also make suggestions for future research here.

Writing Mixed Research Reports

- First, know your audience and write in a manner that clearly communicates.
- The suggestions already discussed in this chapter for quantitative and qualitative also apply for mixed research.
- In general, try to use the same seven headings discussed above.
- Here are a few organization options:
    1. Organize the introduction, method, and results by research question.
    2. Organize some sections (e.g., method and results) by research paradigm (quantitative and qualitative).
    3. Write essentially two separate subreports (one for the qualitative part and one for the quantitative part).
    4. NOTE: in all cases, if you are writing a mixed research report, mixing must take place somewhere (e.g., at a minimum the findings must be related and "mixed" in the discussion section).